

Claims

[c1] A method for detecting the status of printers on a network using a print processor, said method comprising the acts of:
 sending a signal to a print processor; and
 detecting the status of printers on a network from said print processor to determine the availability of said printers.

[c2] The method of claim 1 wherein said signal is a print task.

[c3] The method of claim 1 wherein said detecting comprises obtaining network print queue information.

[c4] The method of claim 1 wherein said detecting comprises bi-directional communication between a print processor, a port manager and a printing device.

[c5] The method of claim 1 wherein said detecting comprises accessing data from a Management Information Base (MIB).

[c6] The method of claim 1 wherein said detecting comprises communication with a printing device using a protocol selected from the group consisting of Simple Network Management Protocol (SNMP), Remote Management (RMON) and Internet Printing Protocol (IPP).

[c7] The method of claim 1 wherein said detecting comprises the use of an Application Program Interface (API) call.

[c8] A method of improving the probability of successful print task completion using a status detecting print processor, said method comprising:
 sending a print task to a print processor;
 detecting, from said print processor, the status of a plurality of printing devices; and
 directing said print task to an available printing device among said plurality of printing devices.

[c9] The method of claim 8 wherein said status of a plurality of printing devices is

presented to a user for selection of one or more available devices and said directing directs said print task to a device selected by said user.

[c10] The method of claim 8 wherein a default printing device is selected by a user prior to said detecting and said directing directs said print task to said default device when said default device is available.

[c11] The method of claim 8 wherein said print processor may also modify a print task to enable cluster printing functions.

[c12] The method of claim 11 wherein said modifying said cluster printing functions comprise job splitting.

[c13] The method of claim 11 wherein said modifying said cluster printing functions comprise copy splitting.

[c14] The method of claim 11 wherein said detecting determines a number of available printing devices and said modifying divides said initial print task into a number of modified print tasks equal to said number of available printing devices.

[c15] A method for improving printing system capability and performance without addition of hardware or modification of application software, said method comprising:
removing a non-status-detecting print processor (NPP) from a printing system; and
replacing said NPP with a status-detecting print processor (SDPP).

[c16] The method of claim 15 wherein said SDPP is also cluster enabling.

[c17] A computer readable medium comprising instructions for performing functions within a print processor, said instructions comprising the acts of:
interpreting print task data; and
detecting the status of printing devices.

[c18] The computer readable medium of claim 17 further comprising instructions

for the act of redirecting a print task from its original destination to at least one other destination.

[c19] A computer data signal embodied in an electronic transmission, said signal having the function of detecting printing device status with a print processor, said signal comprising instructions for:
interpreting print task data; and
detecting the status of printing devices.

[c20] A print processor comprising:
instructions for interpreting print task data; and
instructions for detecting the status of printing devices.

[c21] A method of printing using a status detecting print processor, said method comprising:
selecting a preferred printer group;
modifying said print task to enable cluster printing thereby creating a plurality of modified print tasks;
detecting, from said print processor, the status of a plurality of printing devices comprising said preferred printer group;
directing said modified print tasks to said preferred printer group when all of the printers within said preferred printer group are available; and
forming a second group of printers comprising the available printers within said preferred group and other available printers and sending said modified tasks to said second group when said second group comprises a sufficient number of printers to print said modified print tasks.

[c22] The method of claim 21 further comprising selecting a group of backup printers from which said other available printers may be chosen.

[c23] The method of claim 21 further comprising reconfiguring said modified print tasks to require fewer printers when a sufficient number of available printers

cannot be found.

- [c24] The method of claim 21 further comprising forming a third group of printers comprising any available printers from said preferred group, any other available printers and any busy printers and directing said modified print tasks to said third group.
- [c25] The method of claim 21 further comprising entering a wait period when a sufficient number of printers are not available and rechecking for available printers after said wait period.
- [c26] The method of claim 21 further comprising activating a user prompt to solicit user input.

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